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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/448,679	11/24/1999	CHRISTOPHER J. LORD	INTL-0252-US	5314

7590

05/23/2002

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EXAMINER

TRAN, TRANG U

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 05/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/448,679

Applicant(s)

LORD ET AL.

Examiner

Trang U. Tran

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Acharya et al. (US. Patent No. 6,229,578 B1).

In consider claim 1, Acharya et al. discloses all the claimed subject matter, note 1) the claimed receiving a video frame is met by the localization region within the capture image (Fig. 1, col. 4, lines 29-42) or the 6X6 pixel region of a captured image (Fig. 8, lines 49-65); 2) the claimed identifying noise in a first portion of the video frame is met by the method of edge detection for determine an "edge" pixel or a non-edge pixel (Fig. 1, col. 5, lines 11-67); and 3) the claimed replacing the first portion with a second portion of the video frame is met by the linear averaging technique replaces the pixel under consideration with a linear average of itself and neighboring pixels that have a similar intensity (Fig. 6, col. 11, line 29 to col. 13, line 3).

In consider claim 2, the claimed wherein identifying further comprises: associating a noise level with the first portion of the video frame the gradient (or normalized gradient) value associated with each and every pixel in the localization region by applying some mask or operator (Fig. 1, col. 4, line 43 to col. 5, line 11); and

comparing the noise level to a predetermined value is met by step 140 of Fig. 1 (col. 5, lines 12-44).

In consider claim 3, the claimed wherein associating further comprises distinguishing the first portion from the second portion is met by col. 11, lines 35-41.

In consider claim 4, Acharya et al discloses all the claimed subject matter, note 1) the claimed wherein distinguishing further comprises: associating a first value with the first portion is met by the intensity values of the pixel which considered for noise removal $x(i, j)$ (Fig. 6, col. 11, lines 32-52); 2) the claimed associating a second value with the second portion is met by the AVD (absolute value difference) of each adjacent pixel (Fig. 6, line 53 to col. 12, line 5); and performing a plurality of arithmetic operations between the first value and the second value is met by col. 11, line 53 to col. 13, line 3.

In consider claim 5, the claimed wherein associating a first value with the first portion further comprises: identifying a plurality of values associated with the first portion; and performing an arithmetic operation on the plurality of values to render the first value is met by the AVD (absolute value difference) of each adjacent pixel (Fig. 6, col. 11, line 53 to col. 13, line 3).

In consider claim 6, the claimed wherein comparing the noise to a predetermined value comprises comparing the noise to a noise level found in a second video frame is met by the selecting threshold value (Fig. 1, col. 4, line 66 to col. 5, line 44).

In consider claim 7, the claimed wherein comparing the noise to a predetermined value comprises associating the predetermined value to the type of video input signal is met by the selecting threshold value (Fig. 1, col. 4, line 66 to col. 5, line 44).

In consider claim 8, the claimed wherein comparing the noise to a predetermined value comprise associating the predetermined value to the type of noise in the video frame is met by the selecting threshold value (Fig. 1, col. 4, line 66 to col. 5, line 44).

In consider claim 9, Acharya et al. discloses all the claimed subject matter, note 1) the claimed a bus is met by the system bus 713 (Fig. 7); 2) the claimed a processor coupled to the bus is met by the processor 712 (Fig. 7, col. 13, lines 45-67); 3) the claimed a device coupled to the bus to receive a video signal is met by the camera 730 (Fig. 7, col. 13, lines 17-44); and 4) the claimed a storage medium coupled to the bus including a software program that, upon execution: detects noise in a first portion of a video frame of the video signal; and replaces a first portion of the video frame is met by the memory 711, such as RAM, which is used to store/load instruction, addresses and result data (Fig. 7, col. 13, line 45 to col. 14, line 60).

In consider claim 10, the claimed wherein the video frame is stored in a memory and, upon execution, the software program writes to the memory to replace the first portion of the video frame is met by the memory 711, such as RAM, which is used to store/load instruction, addresses and result data (Fig. 7, col. 13, line 45 to col. 14, line 60).

Claim 11 is rejected for the same reason as discussed in claim 2.

In consider claim 12, the claimed wherein the predetermined value is stored in the memory is met by the memory 711, such as RAM, which is used to store/load instruction, addresses and result data (Fig. 7, col. 13, line 45 to col. 14, line 60).

Claims 13-14 are rejected for the same reason as discussed in claims 6-7, respectively.

In consider claim 15, the claimed wherein the storage medium is a hard disk drive is met by the hard disk drive 718 (Fig. 7).

Claim 16 is rejected for the same reason as discussed in claim 1.

In consider claim 17, the claimed further storing instructions that cause the processor-based system to locate the video frame by reading a memory device is met by the memory 711, such as RAM, which is used to store/load instruction, addresses and result data (Fig. 7, col. 13, line 45 to col. 14, line 60).

Claim 18 is rejected for the same reason as discussed in claim 2.

Claims 19-21 are rejected for the same reason as discussed in claims 4-6, respectively.

In consider claim 22, the claimed wherein the medium storing instructions is a memory device is met by the memory 711, such as RAM, which is used to store/load instruction, addresses and result data (Fig. 7, col. 13, line 45 to col. 14, line 60).

Claims 23-24 are rejected for the same reason as discussed in claims 7-8, respectively.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Watkins (US. Patent No. 6,369,859 B1) discloses patching degraded video data.

Kikuchi et al. (US. Patent No. 6,064,776) disclose image processing apparatus.

Lee (US. Patent No. 6,226,050 B1) discloses signal adaptive filtering method for reducing ringing noise and signal adaptive filter.

Saito (US. Patent No. 5,541,667) discloses method and apparatus for lost block substitution in a moving picture receiving system.

Takayama et al (US. Patent No. 4,706,132) disclose video signal processing system.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Trang U. Tran** whose telephone number is **(703) 305-0090**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller**, can be reached at **(703) 305-4795**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

TT TT
May 19, 2002


MICHAEL H. LEE
PRIMARY EXAMINER